

SANYO Semiconductors DATA SHEET

2SK2533— R-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · High-speed diode.
- Enables simplified fabrication, high-density mounding, and miniaturization in end products due to the surface mountable package.
- · High-speed switching.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		250	V
Gate-to-Source Voltage	VGSS		±30	V
Drain Current	ID		12	А
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	48	А
Allowable Power Dissipation	PD	Tc=25°C	45	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			1.1-24
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	250			V
Gate-to-Source Breakdown Voltage	V(BR)GSS	IG= ±100μA, VDS=0V	±30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =250V, V _{GS} =0V			1.0	mA
Gate-to-Source Leakage Current	IGSS	V _{GS} = ±25V, V _{DS} =0V			±10	μΑ
Cutoff Voltage	VGS(off)	V _{DS} =10V, I _D =1mA	2.0		3.0	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =6A	6.0	10		S

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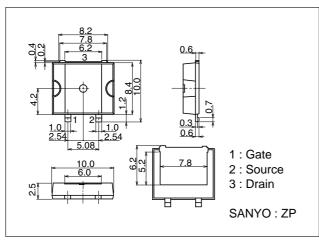
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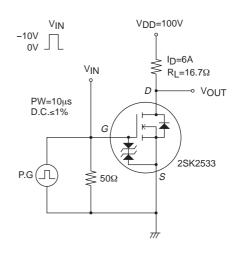
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Static Drain-to-Source On-State Resistance	RDS(on)	ID=6A, VGS=10V		200	270	mΩ
Input Capacitance	Ciss	V _{DS} =20V, f=1MHz		1290		pF
Output Capacitance	Coss	V _{DS} =20V, f=1MHz		300		pF
Reverse Transfer Capacitance	Crss	V _{DS} =20V, f=1MHz		125		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		22		ns
Rise Time	t _r	See specified Test Circuit.		66		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		320		ns
Fall Time	tf	See specified Test Circuit.		105		ns
Diode Forward Voltage	V _{SD}	I _S =13A, V _{GS} =0V		1.0	1.5	V
Diode Reverse Recovery Time	t _{rr}	I _S =13A, di / dt=100A / μs		160		ns

Package Dimensions

unit : mm 7002-001



Switching Time Test Circuit



Note on usage: Since the 2SK2533 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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